

TANOVITSKAYA, T.Kh.

Lithological-petrographic characteristics of the Upper Cretaceous deposits of the central Kopet-Dag. Izv.AN Turk.SSR.Ser.fiz.-tekh., khim.i geol.nauk no.3:92-97 '63. (MIRA 17:3)

1. Institut geologii AN Turkmenskoy SSR.

TANOVITSKAYA, T. Kh.

Petrographical and mineralogical characteristics of Paleogene
clay rocks in the central Kopetdag. Izv. AN Turk. SSR. Ser.
fiz.-tekhn., khim. i geol. nauk no.3:111-115 1964 (MIRA 18:1)

1. Institut geologii AN Turkmeniskoy SSR.

TANOVITZAYA, T.Kh.

Lithologic and petrographic characteristics of Palaeogene sediments
in the central Kopeiduz. Izv. AN Turk. SSR. Fiz.-tekh., khim.
i geol. nauk no. 6314-176 '84. (MIRA 18:4)

1. Institut geologii Gosudarstvennogo geologicheskogo komiteta
USSR.

PAREMSKIY, B.D.; dots., red.; OREKHOV, V.I., red.; TANOVITSKAYA,
Ye.M., spets. red.

[Mechanization of basic and auxiliary peat winning operations in White Russia] Mekhanizatsiia osnovnykh i vspomogatel'nykh rabot po dobyche torfa v Belorussii. Minsk, 1964. 91 p. (MIRA 18:5)
1. Institut BELGIPROTORF.

TANDVITSKIY, I.G.

KUNITSKIY, K.P.; BELAYA, M.M.; TANOVITSKIY, I.G.

Mechanization of the operations of drying excavator peat. Trudy
Inst. torf. AN BSSR 9:91-97 '60. (MIRA 14:2)
(Peat--Drying)

TANOVSKIY, P.I., inzh.; ALEKSEYEV, M.M., dotsent, kand. geologo-min.nauk;
KAPKOVA, Ye.I., dotsent, kand. khim nauk

Effect of ultraviolet and X rays on the flotability of coal sludge.
Nauch. dokl. vys. shkoly; gor. delo no.1:227-232 '59.
(MIRA 12:5)

1. Predstavlena kafedroy geologii Khar'kovskogo gornogo instituta.
(Coal preparation) (Ultraviolet rays) (X rays)

TANSKA COUNTRY : Poland H-29
 CATEGORY :
 ABS. JOUR. : RZKhim., No. 1959, No. 73206
 AUTHOR : Rabek, T. I.; Malczewski, J.; Tanska, A.
 INST. :
 TITLE : Synthetic Ion-Exchange Resins. Communication
 III. Synthesis of Weakly-Basic Anion Exchanger
 from m-Phenylene-Diamine
 ORIG. PUB. : Przem. chem., 1958, 37, No 9, 596-598
 ABSTRACT : There has been synthesized a new anion ex-
 changer FDP of the weakly-basic type, having better proper-
 ties than Wofatit MD. Polyethylene-polyimines are obtained
 from dichlorethane and NH_3 , in a tin-lined autoclave, by
 heating at 140-150° at a pressure not exceeding 15 atm. The
 reaction product is made alkaline, excess NH_3 and a portion
 of the water are removed in vacuum. After addition of 50%
 solution of NaOH a mixture of polyimines separates. By
 fractional distillation in vacuum the ethylene diamine is
 removed from this mixture and the residual polyethylene-
 polyimines are used to synthesize the anion exchanger.
 0.25 mole m-phenylene diamine are dissolved in 33.7 g water
 CARD: 1/2

111

COUNTRY : Poland
CATEGORY :

H-29

ABS. JOUR. : RZhKhim., No. 1959, No. 73206

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : with addition of 0.158 mole HCl (specific gravity 1.19) and 23.7 g ice. Then 4.85 g polyethylene polyimides and 0.107 mole HCl are added, the mixture is cooled to 8-11°, after which 0.557 mole 40% CH₂O are added at 2-3°, and the mixture is stirred vigorously. The temperature rises rapidly to 60-70° and a gel is formed which after drying forms black granules. Determination of exchange capacity of the anion exchanger was conducted by the simplified dynamic method of Kunin and Mayers. Mechanical strength was determined by grinding in a ball mill. The anion exchanger has an exchange capacity of the order of 4.2-4.8 mg-equivalent/g R-Cl. Communication II see RZhKhim., CARD: 2/2 1958, No 19, 66040. -- L. Popov.

TANSKIY, A. (Dnepropetrovsk)

How we secure the fulfillment of the plan. Sov. torg. 34
no.6:37-38 Je '61. (MIRA 14:7)
(Dnepropetrovsk--Department stores)

L 50502-65 EWT(1)/EWP(m)/EPA(s)-2/EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/EWP(v)/EPR/T-2/
EWP(k)/EPA(bb)-2 Pd-1/Pf-4/Ps-4/Pu-4 NH/EM
ACCESSION NR: AP5012097 UR/0147/65/000/002/0147/0151

AUTHOR: Pogrebenny, I. N., Tanskiy, A. M. 52
B

TITLE: Design of the leading edge and intake section of the blade of the working rotor of a centrifugal pump with arbitrary initial twisting of the liquid stream 23

SOURCE: IVUZ. Aviatzionnaya tekhnika, no. 2, 1965, 147-151

TOPIC TAGS: water turbine design, centrifugal pump, turbine blade design, pump rotor design, hydrodynamics 26

ABSTRACT: The article deals with the introduction of the three-dimensional theory of liquid motion into the design of pumprotors in connection with the transition from rotors with cylindrical blades to rotors with doubly-curved blades. An analysis is made of the method most commonly used at the present time for designing spatial blades, and it is shown that a serious defect of this method is the arbitrary selection of the skeletal profile line which is not related to the form of the axiosymmetrical surfaces of the current by any kinematic conditions. The approximate grapho-numerical method proposed by I. N. Voznesenskiy for finding the surface of a blade, based on the equations for the motion of a non-viscous liquid, is discussed (Voznesenskiy, I. N. Zhizn', deyatel'nost' i trudy v oblasti gidromashinostroyeniya i avtomaticheskogo regulirovaniya. M., Mashgiz, 1952). The author Card 1/4

L 50502-65

ACCESSION NR: AP5012097

notes that an obstacle to the use of this method in the design of pump blades is the absence of a method for constructing the leading segment of the blade of a rotor working in a flow created by a screw conveyor. The liquid flow after the conveyor has a distribution of the circumferential component of absolute velocity C_u which makes it impossible to select the vortex line $C_u r = \text{const.}$ as the leading (intake) edge of the working rotor, as Voznesenskiy's method requires. The object of the present article is the determination of the form of the leading edge and intake segment of a working rotor blade, when the flow of the liquid has been twisted in advance of the wheel in an arbitrary manner. This problem is broken down into two sub-problems: 1) determination of the form and position of the initial vortex line L_2 , 2) determination of the form of the blade section between the leading edge L_1 and the vortex line L_2 (see Figure 1 of the Enclosure). The method developed by the author makes it possible to apply Voznesenskiy's theory to the problem of designing the working rotors of centrifugal pumps operating with screw conveyers and other devices which have the effect of twisting the flow as it enters the rotor. Orig. art. has: 3 figures and 12 formulas.

Card 2/4

L 50502-65

ACCESSION NR: AP5012097

ASSOCIATION: None

SUBMITTED: 13Jun64

ENCL: 01

SUB CODE: ME, PR

NO REF SOV: 002

OTHER: 000

Card 3/4

L 50502-65

ACCESSION NR: AP5012097

ENCLOSURE: 01

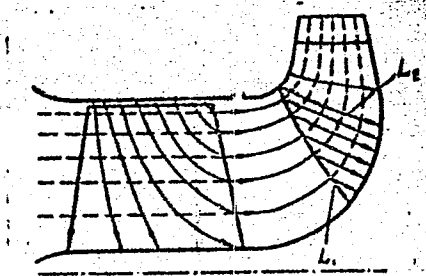


Figure 1. Vortex model of sequentially connected axial and centrifugal pump stages. The dotted lines indicate the current lines, the solid lines with arrows - the vortex lines. L_1 - leading edge of the blade of the centrifugal rotor; L_2 - initial vortex line.

Card 4/4

L 58555-65 EWT(m)/EWP(k)/ENP(v)/T-2/EWP(k) Pf-4 EM

ACCESSION NR: AP5014149

UR/0143/65/000/005/0090/0092

621.601

22
B

AUTHOR: Pogrebenny, I. N. (Candidate of technical sciences, Docent);
Tanskiy, A. M. (Engineer)

TITLE: Constructing the three-dimensional blade of a centrifugal pump impeller

SOURCE: IVUZ. Energetika, no. 5, 1965, 90-92

TOPIC TAGS: centrifugal pump, pump impeller, pump blade

ABSTRACT: A method is suggested for calculating the coordinates of some points of a three-dimensional blade on the basis of the coordinates of a flow surface S and a line L lying in this surface. A procedure for calculating these coordinates is outlined for the case when S and L have been determined according to the I. N. Voznesenskiy method ("Life, etc.", Mashgiz, Moscow, 1952). The latter yields: (a) coordinates of some points on the line L which belongs with a definite surface R and (b) cosines of tangent vectors of eddy lines and flow lines which intersect at the above points. The analytical determination of the blade profile obviates complicated and laborious graphical methods proposed by L. A. Drayfus (Stockholm, 1946) and A. Yu. Cotton (1958). Orig. art. has: 2 figures and 5 formulas.

Card 1/2

L 58555-65

ACCESSION NR: AP5014149

ASSOCIATION: Voronezhskiy politekhnicheskii institut (Voronezh Polytechnic
Institute)

SUBMITTED: 14Jun64

ENCL: 00

SUB CODE: IE

NO REF SOV: 003

OTHER: 000

Card2/2 *APP*

POGREBENNYI, I.N.; TANSKIY, A.M.

Designing the input edge and input area of the blade of a centrifugal pump wheel in case of an arbitrary initial twisting of the fluid flow. Izv. vys. ucheb. zav., av. tekhn. 8 no.2:147-151 '65.
(MIRA 18:5)

POGREBENNYI, I.N., kand. tekhn. nauk, dotsent; TANSKIY, A.M., inzh.

Design of a solid spatial vane of the runner of a centrifugal pump. Izv. vys. ucheb. zav.; energ. 8 no.5:90-92 Ny '65.
(MIPA 18:6)

1. Voronezhskiy politekhnicheskoy institut. Predstavlena kafedroy tepolovoykh dvigateley.

TANSKIY, V.I.

Comparing the population of European grain thrips (*Haplothrips tritici* Kurd) on various spring wheat varieties and their harmfulness in northern Kazakhstan. Trudy VIZR no.11:7-25 ' 58.

(MIRA 12:1)

(Kazakhstan--Wheat--Diseases and pests)
(Thrips)

TANSKIY, V.I.

Underlying principles of agricultural practices used to control the wheat thrips *Haplothrips tritici* Kurd. (Thysanoptera, Phloeothripidae) in northern Kazakhstan [with summary in English]. Ent.oboz. 37 no.4:785-797 '58. (MIRA 11:12)

1. Vsesoyuznyy institut zashchity rasteniy, Leningrad.
(Kazakhstan--Thrips) (Wheat--Diseases and pests)

TANSKIY, V. I.: Master Biol Sci (diss) -- "Wheat thrips in regions where virgin and fallow lands are being cultivated in northern Kazakhstan". Leningrad, 1959. 19 pp (All-Union Order of Lenin Acad Agric Sci im V. I. Lenin, All-Union Sci Res Inst of Plant Protection), 150 copies (KL, No 18, 1959, 124)

GRIGOR'YEVA, T.G., kand. sel'skokhoz. nauk; BOBINSKAYA, S.G., kand. biolog.
nauk; TANSKIY, V.I., mladshiy nauchnyy sotrudnik

Biological characteristics of the cutworm *Hadena sordida* and the
forecast of its multiplication. Zashch. rast. ot vred. i bol. 4
no.2:38-41 Mr-Apr '59. (MIRA 16:5)

(Cutworms)

TANSKIY, V.I., kand.biolog.nauk

Harmfulness of wheat thrips. Zashch.rast.ot vred.i bol. 5
no.7:23-25 J1 '60. (MIRA 16:1)
(Kustanay Province--Wheat--Diseases and pests)
(Kustanay Province--Thrips--Extermination)

TANSKIY, V.I.

Migrations of the wheat thrips (*Haplothrips tritici* Kurd.) Zool.
zhur. 39 no.9:1345-1349 S '60. (MIRA 13:9)

1. All-Union Research Institute of Plant Protection, Leningrad.
(Kustanay Province--Thrips) (Insects--Migration)
(Wheat--Diseases and pests)

TANSKIY, V.I.

Formation of the thrips (Thysanoptera) fauna on wheat crops
on the new lands of northern Kazakhstan. Ent. oboz. 40 no.4:
785-793 '61. (MIRA 17:1)

1. Vsesoyuznyy institut zashchity rasteniy Vsesoyuznoy
akademii sel'skokhozyaystvennykh nauk imeni Lenina, Lenin-
grad.

TANSKIY, V.I.

Methods of a quantitative census of thrips. Vop. ekol. 4:146-149
'62. (MIRA 15:11)

1. Vsesoyuznyy institut zashchity rasteniy, Leningrad.
(Thrips)

TANSKIY, V.I., kand. biolog. nauk

Determining the harmfulness of the larvae of the European grain thrips. Zashch. rast. ot vred. i bol. 7 no.12:43-44
D '62. (MIRA 16:7)

1. Vsesoyuznyy institut zashchity rasteniy.
(Thrips) (Wheat—Diseases and pests)

TANSKIY, V.I.

Effect of varietal characteristics of spring wheat on the development of the owl moth *Hadena sordida* Bkh. Zool. zhur. 43 no.8:1145-1154 '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy, Leningrad.

TANSKIY, V.I.

Some characteristics of the fauna of thrips (Thysanoptera) as
a component of steppe and wheat field biocenoses. Trudy Vses.
ent. ob-va 50:67-72 '65. (MIRA 18:5)

ZENOVICH, V.I., inzhener; TANSKIY, V.V., inzhener.

Inventory unit for defreezing and heating of fillers. Nov.tekh.
i pered. op. v stroi. 19 no.2:11-13 P '57. (MLRA 10:4)
(Concrete--Cold weather conditions)

TANOSKIY, V.V.

ZENOVICH, V.I., inzh; TANSKIY, V.V., inzh.

Combination plant for crushing and slaking lime. Nov.tekh. i
pered. op. v. stroi. 19 no.12:21-24 D '57. (MIRA 11:1)
(Lime) (Crushing machinery)

TANSKIY, V., insh.

Production of three-ply wood chip blocks. Biul. tekhn. inform. 4 no. 4:
28-30 Ap '58. (MIRA 11:5)

(Wida, Poland--Wood, Compressed)

TANSKIY, V.V., inzh.; ZAGOSKINA, G.V., red.; SHENDAREVA, L.V.,
tekhn.red.

[Making particle board using the pneumatic fractionation
of shavings] Proizvodstvo drevesno-struzhechnykh plit s
pnevmaticheskim fraktsionirovaniem struzhek. Moskva,
TSentr.biuro tekhn.informatsii Glavstandartdoma, 1959.
15 p. (MIRA 13:1)

(Wood, Compressed)

TANSKIY, V.V., inzh.; POSPELOVA, G.L., red.; KOLOMEYER, V.Z., tekhn.red.

[Using synthetic materials in building (floors, roofing, and waterproofing materials, heat insulating and acoustical materials)]
Primenenie sinteticheskikh materialov v stroitel'stve (poly, krovlya, teplo-, zvuko i gidroizolyatsiya). Moskva, TSentr.biuro tekhn. informatsii Glavstandartdoma, 1959. 34 p. (MIRA 13:1)

1. Gosudarstvennyy proyektnyy institut No.2 (for Tanskiy).
(Plastics)

KICHAYEV, V.G.; LAVROV, N.A.; TANSKIY, V.V.; GREBEN'KOV, B.A.

Conveyer frames made of precast reinforced concrete elements.
Rats. predl. no. 37:17-18 '59. (MIRA 14:1)
(Conveying machinery)

TANSKIY, V.V.; KOYENMAN, G.P.; VOZHENKO, G.V.; GORDONOVA, S.M.; KUGUSHEV, I.N.; GENIN, M.Ya; VISHNEVSKIY, A.V., red.; AVINOVITSKIY, I.Ya., inzh. nauchn. red.; GORCHAKOV, A.V., otv. red.; RASKIN, Yu.A., red.

[Plastics in construction] Plastmassy v stroitel'stve; tematicheskiy sbornik. Moskva, TSentr.biuro tekhn.informatsii tekhn. upravleniya, 1960. 156 p. (MIRA 14:12)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Vishnevskiy). 2. TSentral'noye byuro tekhnicheskoy informatsii (for Raskin).

(Plastics) (Building materials)

13,2000

S/112/59/000/016/023/054
A052/A002

Translation from: Referativnyy zhurnal, Elektrotehnika, 1959, No. 16, p. 131,
34448

AUTHOR: Tanskiy, Ye. A.

TITLE: To the Problem of Calculation of Some Servo Systems ⁹

PERIODICAL: Sb. statey po elektropriborost. (Leningr. in-t tochn. mechan. i optiki, No. 28), Leningrad, 1957, pp. 54-63

TEXT: The calculation of servo systems described by a second order linear equation is discussed for the case transistor, electronic or thyatron amplifiers are used in them. The described methods of calculation can also be used for a preliminary calculation of low-power servo systems with magnetic amplifiers. Four types of servo systems are considered: 1) systems with additional internal friction, 2) with rigid negative velocity feedback, 3) with a differentiating element, and 4) with rigid positive velocity feedback and a differentiating element. In view of the fact that the values of parameters of servo system elements are limited, as a limiting value is taken the maximum value of the cue

Card 1/2

To the Problem of Calculation of Some Servo Systems

S/112/59/000/016/023/054
A052/A002

voltage (for a system with a low-power asynchronous motor) or the maximum value of the motor moment (for medium-power motors). Correspondingly, 2 calculation methods are considered: by the maximum voltage and by the maximum moment. When calculating a system, the following quality indices are satisfied: 1) mismatch angle in kinetic conditions; 2) the maximum value of the mismatch angle in transient conditions; 3) the time of transient conditions. Graphs facilitating the calculation of the above-mentioned servo system types are given. There are 9 illustrations.

V. Ye. G. ✓B

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

66209

SOV/146-59-1-4/21

~~9/2~~ 9.2520

AUTHORS:

Tanskiy, Ye.A., Candidate of Technical Sciences, Docent, and
Nikolayenko, N.S., Senior Engineer

TITLE:

A Servo System With a Transistorized Amplifier

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1959,
Nr 1, pp 28-33 (USSR)

ABSTRACT:

The authors describe a servo system with a transistorized ac amplifier. The circuit diagram is shown in fig.1. The amplifier has two stages. One 1P6 and two P3V transistors are used. DG-Ts24 diodes are used as voltage limiters. The power amplification is about 53 db. The amplification factor at the outlet is around 400. The arrangement of the parts in the assembled amplifier is shown in fig.5. The experimental data on the frequency characteristic coincide with theoretical data. The efficiency of the output stage is about 60%. The transistors are installed for cooling purposes on aluminum radiators having a surface of 15 cm². The amplifier was built at the Kafedra avtomatiki i telemekhaniki (Department of Automation and Remote Con-

Card 1/2

66209

SOV/146-59-1-4/21

A Servo System With a Transistorized Amplifier

trols) of the Leningrad Institute of Precision Mechanics and Optics. The method for calculating and testing the amplifier was developed by Ye.A. Tanskiy, the amplifier was built by N.S. Nikolayenko. There are 1 photograph, 1 circuit diagram, 1 block diagram, 2 graphs and 1 table.

ASSOCIATION: Leningradskiy institut tochnoy mechaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: October 2, 1958

Card 2/2

TANSKIY, Ye.A., dotsent, kand.tekhn.nauk

Evaluating conditions of linear operation of servosystems.
Izv.vys.ucheb.zav.; prib. no.3:3-7 '59. (MIRA 13:4)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana kafedroy avtomatiki i telemekhaniki.
(Automatic control)

9(6)

S/146/60/003/01/003/016
D002/D006

AUTHORS: Orlov, V.P., Candidate of Technical Sciences, Senior Staff Member,
Tanskiy, Ye.A., Candidate of Technical Sciences, Docent

TITLE: A Follow-up Instrument System With Protection from Idle Phase Voltage


PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, 1960,
Vol. 3, Nr 1, pp 18-25 (USSR)

ABSTRACT: At the Kafedra avtomatiki i telemekhaniki (Chair of Automation and Telemechanics), the authors developed a follow-up system (Figure 1) with a small-size amplifier (Figure 2, photograph) in which a single-cycle key demodulator and a single-cycle key modulator on semi-conductor triodes (Figure 3) are used as a protection against the idle phase voltage. The calculation results of the formula for the determination of the transmission coefficient and time constant of the protection device are given, and the transmission function and the characteristics of the follow-up system are investigated mathematically. It is pointed out that the device is very reliable at a frequency of one cycle and an oscillation amplitude of 16° . The

Card 1/2

S/146/60/003/01/003/016
D002/D006

A Follow-up Instrument System With Protection from Idle Phase Voltage

curves showing the oscillations of the follow-up axis are illustrated (Figure 5), and show that the amplitude error is very small. The article was recommended by the Chair of Automation and Telamechanics. There are 2 photographs, 3 diagrams, and 1 graph. 

ASSOCIATION: Leningradskiy Institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: November 21, 1959

Card 2/2

ACC No: AP7002452

SOURCE CODE: UR/0362/66/002/011/1200/1201

AUTHOR: Golubitskiy, B. M.; Zakirova, A. R.; Tantashev, M. V.

ORG: none

TITLE: Monte Carlo calculation of radiation transport in a homogeneous scattering sphere with a central point source

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 11, 1966, 1200-1201

TOPIC TAGS: transport phenomenon, radiation source, electromagnetic wave scattering, Monte Carlo method, angular distribution

ABSTRACT: The article deals with the angular distribution of radiation on the boundary of a homogeneous scattering sphere, in the center of which is situated an isotropic point source, using the only assumption that the scattering medium consists of a set of individually non-absorbing spherical particles, such as were discussed by D. Deiermenjian (Appl. Opt. v. 2, 187, 1964). The calculations were made with the 'Ural'-2 computer by the Monte Carlo method, making use of a known relation between any random number and its arbitrary distribution density, in this case the distribution density of the mean free paths and the scattering angles. The results were found to be in good agreement with trial calculations by means of numerical integration. It is indicated that the method can be used for calculations with arbitrary

Card 1/2

UDC: 535.36

ACC NR: AP7002452

scattering indicatrices with allowance for polarization and absorption, and also to solve more complicated problems of radiation transport. Orig. art. has: 2 figures and 4 formulas.

SUB CODE: 20/ SUBM DATE: 14Apr66/ ORIG REF: 004/ OTH REF: 001

Card 2/2

KATAYEV, Ye.G.; TANTASHEVA, F.R.

Divinyl sulfoxide and divinyl sulfone in diene synthesis with
symmetric dienes. Dokl. AN SSSR 141 no.5:1101-1104 D '61.
(MIRA 14:12)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.
Predstavleno akademikom B.A. Arbutovym.
(Olefins) (Sulfoxides)
(Sulfone)

KATAYEV, Ye.G.; TANTASHEVA, F.R.

Dienophilic activity of β, β' -dichlorodivinyl sulfoxide,
 β, β' -dibromodivinyl sulfoxide, and β, β' -dibromodivinyl sulfone.
Zhur.ob.khim. 33 no.7:2307-2310 J1 '63. (MIRA 16:8)

1. Kazanskiy gosudarstvennyy universitet imeni Ul'yanova-Lenina.
(Sulfoxide) (Sulfone) (Chemistry, Organic—Synthesis)

BULGARIA

TANTILOV, Asen, Dr, Veterinarian at Workers' Cooperative Agricultural Enterprise (veterinaren lekar pri trudovo-kooperativnite zemedelskoto stopanstvo,) Debelets, Turnovsko.

"The Battle Against Infertility in Cows."

Sofia, Veterinarna Sbirka, Vol 60, No 6, 1963; pp 20-21.

Abstract : Report of 4 years' experiences in 193-head dairy farm: following favorable report of use of horseradish and garlic phytoncides, author tried onion fresh water 'extracts' in 73 infertile cows assumed to have 'symptomless endometritis'; good results: one cycle of treatment brought normal estrus back in 71%, 2 cycles in 80.8%, 3 in 97% whereas more conventional fish oil - 'toromangan' and pilocarpine brought estrus on in 74%. Cheapness and simplicity of onion treatment recommend it.

KATAYEV, Ye.G.; TANTASHEVA, F.R.; YARKOVA, E.G.

Reaction of triethyl phosphite with β -bromovinyl sulfones.
Zhur. ob. khim. 35 no.4:759 Ap '65.

(MIRA 18:5)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.

TANTILEVSKIY, Ye.M., ekonomist; KHANIKULINA, G.A., ekonomist.

Cost indices of lacquer and paint materials. Soob. intern.
soob. VNIINSM no.15:7-20 '62. (MIRA 14:3)

1A 1/49761

USSR/Geophysics
Atmosphere--Measurements
Refraction

Jul/Aug 48

"Calculation of Atmospheric Refraction During
Aerological Observations," I. Ya. Tantor

"Zh Ak Nauk SSSR, Ser Geog i Gëofiz" Vol XIII, No 4

Presents tables added to those already in
"Instructions for Hydrometeorological Posts and
Stations" Issue 4, Part II, published in 1932
and 1945. Tables list corrections for refraction
deviations during astronomical observations.

720

1/49761

TANTOS, Ferenc

Up-to-date farm buildings. Technika 7 no.1:6-7 Ja '63.

1. Epitestudományi Intezet tudományos munkatársa.

POLUKHIN, N. P.; KORMHENEVSKIY, V. V.; MONAKHOV, Ye. N.; TANTOV, S. V.

"An Automatic Device for Checking the Electrical Parameters
of Micro-Elements"

Report submitted at the Third Conference on Automatic
Control and Electrical Measurement Methods was held at
Novosibirsk, 19-23 Sept. 1961.

VORONITSYN, K.I., kand. tekhn. nauk, red.; TIZENGAUZEN, P.E., kand. tekhn. nauk, red.; NADBAKH, M.P., red.; TANTSEV, A.A., starshiy nauchnyy sotr., red.; ABRAMOV, S.A., kand. tekhn. nauk, red.; ABRAMOV, D.A., red.; BOGDANOV, N.I., starshiy nauchnyy sotr., red.; VINOOROV, G.K., kand. tekhn. nauk, red.; GAVRILOV, I.I., starshiy nauchnyy sotr., red.; GUSARCHUK, D.M., starshiy nauchnyy sotr., red.; D'YAKONOV, A.I., red.; ZAV'YALOV, M.A., kand. tekhn. nauk, red.; ZARETSKIY, M.S., starshiy nauchnyy sotr., red.; KACHELKH, L.I., starshiy nauchnyy sotr., red.; KISHINSKIY, M.I., kand. tekhn. nauk, red.; KOLTUNOV, B.Ya., starshiy nauchnyy sotr., red.; OSIPOV, A.I., kand. tekhn. nauk, red.; SHINEV, I.S., kand. ekon. nauk, red.

[Materials of the enlarged session of the Scientific Council of the Central Scientific Research Institute for Mechanization and Power Engineering in Lumbering on problems concerning power engineering and the electrification of the lumber industry]
Materialy rasshirennoi sessii Uchenogo soveta TsNIIME po voprosu energetiki i elektrifikatsii lesnoi promyshlennosti. Moskva, 1961. 75 p. (MIRA 15:4)

(Continued on next card)

VORONITSYN, K.I.----(continued) Card 2.

1. ~~Khimki~~ Tsentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti. 2. Nachal'nik Tsentral'nogo byuro tekhnicheskoy informatsii lesnoy promyshlennosti (for Nadbakh). 3. Direktor Tsentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Voronitsyn). 4. Uchenyy sovet Tsentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for D'yakonov). 5. Nachal'nik otdeleniya energetiki i sredstv avtomatizatsii Tsentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Zaretskiy).
(Lumbering) (Electric power)

BODRIKOV, I.M., ed.; GOLOVANOV, A.L., redaktor; BEGICHEV, V.G., inzhener;
BERESLAVSKIY, Ya.M., inzhener; ZAK, G.I., inzhener; SOLOGUB, A.D., inzhener;
TANTSMAN, A.I., inzhener; TIKHONOVA, L.V., inzhener.

[Progressive technology in the building materials industry of the Ministry
of Railroad Transportation] *Peredovaya tekhnologiya v promyshlennosti
stroitel'nykh materialov MPS. Moskva, Gos. transp. shel-dor. izd-vo, 1952.*
62 p. (MLBA 6:5)
(Building materials)

TANTSOVA, N. N.

USSR/Geophysics - Condensation nuclei

FD 387

Card 1/1

Author : Smirnov , N. S., Tantsova, N. N., and Shaposhnikova, I. I.

Title : Problem of the origin of condensation nuclei

Periodical : Izv. AN SSSR, Ser. geofiz. 3, 293-298, May/Jun 1954

Abstract : Present the results of systematic measurements of content of ultramicroscopic particles in the air. Show that in the supplying of the atmosphere with condensation nuclei a large role is played by the productive activity of people, but the main factors cleansing the atmosphere of condensation nuclei are precipitation, fogs and high humidity of the air. 5 references-3 Soviet.

Institution : Geophysics Institute, Acad Sci USSR

Submitted : Dec. 12, 1952

TANTSOVA, N. N.

Hydrolysis of nitrovinylsulfuric acid. J. N. Kuz'minsky,
and N. N. Tantsova. J. Appl. Chem. U.S.S.R. 27, 561-52
(1954) (Russian).—See C.A. 48, 13507i.
B. M. R.

TANTSOVA, N.N.

Hydrolysis of nitrosylsulfuric acid. I. N. Kuz'minykh and N. N. Tantsova (D. I. Mendeleev Chem.-Technol. Inst., Moscow). Zhur. Priklad. Khim. 27, 694-696 (1954).
The hydrolysis of HNSO_3 in the concn. range of 70-100% H_2SO_4 and 0.19-5% N_2O_5 was detd. at 19-50° by means of the absorption spectrum in the range of 2400-4500 Å. The extinction coeffs. of no hydrolysis (100% H_2SO_4 + 0.971% N_2O_5) and complete hydrolysis (57.7% H_2SO_4 + 0.19% N_2O_5) as functions of the wave length were straight lines with the max. of the former in the deep ultraviolet. No lines corresponding to any of the oxides of N or to HNO_3 were detected in the spectrum of the products of hydrolysis. The rate of hydrolysis increased with the HNSO_3 concn. and with the temp. I. Bencowitz

DYBOVSKAYA, Irma Konstantinovna, dotsent, kand.filol.nauk; PROMTOVA, Irina Andreyevna; SUVOROVA, Vera Vasil'yevna; CHESKIS, Zoya Borisovna; DEYEV, G.N., red.; MASEVICH, A.G., doktor fiz.-matem.nauk, red.; PARIYSKIY, N.N., kand.fiz.-matem.nauk, red.; TANTSOVA, N.N., kand. tekhn.nauk, red.; TEREENT'YEVA, L.V., red.; TYAGUNOVA, Z.I., red.; KRYUCHKOVA, V.N., tekhn.red.

[French-Russian geophysical dictionary] Frantsuzsko-russkii geofizicheskii slovar'. Pod red. G.N.Deeva i dr. Moskva, Glav.re-daktsiia inostr.nauchno-tekhn.slovari Fizmatgiza, 1960. 374 p. (MIRA 13:9)
(Geophysics--Dictionaries)
(French language--Dictionaries--Russian language)
(Russian language--Dictionaries--French language)

TANTSOVA, N.N. [translator]; IVANOV-KHOLODNYI, G.S., red.; SAMSONENKO,
L.V., red.; KHOMYAKOV, A.D., tekhn. red.

[Investigation of the upper atmosphere by the use of rockets and
satellites; solar short-wave and corpuscular radiations and
their effect on the upper atmosphere of the earth] Issledovaniia
verkhnei atmosfery s pomoshch'iu raket i sputnikov; korotkovolno-
voe i korpuskuliarnoe izlucheniia solntsa i ikh vozdeistvie na
verkhniuiu atmosferu Zemli; sbornik statei. Moskva, Izd-vo inostr.
lit-ry, 1961. 471 p. (MIRA 15:2)
(Solar radiation) (Atmosphere, Upper--Rocket observations)

42150

S/203/62/002/004/012/018
I046/I246

3.5/20

AUTHOR: Tantsova, N.N.

TITLE: Formation of ozone upon the action of α -radiation on air

PERIODICAL: Geomagnetizm i aeronomiya, v.2, no.4, 1962, 732-736

TEXT: The amount of ozone produced in the atmospheric air by radiation from Po210 was found to vary with the time as

$$c = A(1 - e^{-kt})$$

The following figures were obtained for the dependence of the equilibrium ozone yield A and the rate constant k on the activity of the α -radiation source and on the air temperature:

Activity, mc	A	k	Temperature, °C	A	k
491	2.44	1.1	5.5	1.89	0.6
219	1.18	1.1	15	1.61	0.6
130	0.779	1.1	20	1.15	0.8
80.6	0.52	1.1	30	0.779	1.1
			38	0.568	1.55

Card 1/2

S/203/62/002/004/012/018
I046/I246

Formation of ozone upon the action...

The results show that the concentration of the natural α -active impurities in the atmosphere 10^{-15} c/l) is insufficient to produce any substantial amounts of atmospheric ozone. There are 6 figures and 2 tables.

ASSOCIATION: Institut prikladnoy geofiziki (Institute of Applied Geophysics)

SUBMITTED: April 6, 1962

Card 2/2

S/0203/64/004/002/0404/0408

ACCESSION NR: AP4031646

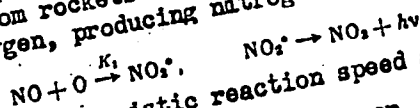
AUTHOR: Tantsova, N. N.

TITLE: An artificial luminescent cloud

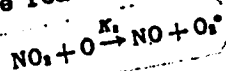
SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 2, 1964, 404-408

TOPIC TAGS: luminescence, nitrous oxide, atmospheric element, visible spectrum radiation, light energy, oxygen, nitrogen, reaction speed

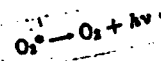
ABSTRACT: A method for measuring the concentrations of oxygen and nitrogen atoms in the upper atmosphere is described. Known amounts of nitrogen monoxide are released from rockets in the upper atmosphere; the nitrogen monoxide combines with atomic oxygen, producing nitrogen dioxide and light energy in the visible spectrum:



where K_1 is a characteristic reaction speed and $h\nu$ is light energy. Subsequent nitrogen dioxide reacts with atomic oxygen,



and



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vsics)

ENCL: 00

OTHER: 018

TANTSUPA, D., mayor, Kozlovskiy tankovogo batal'ona

A guarantee of success is in the unity of training and
education. Voen. vest. 43 no. 5452-56 My '64.

(MIRA 17:6)

TANTSUROV, G. V., Cand Agr Sci -- (diss) "^{effect}~~Influence~~ of Fatness
and Feeding ^{level of}~~level~~ of Sows During the Mating Period and ~~Rearing~~
the ~~Period of~~ ^{to} Pregnancy upon Development, Metabolism, and ^{pro-}~~Per-~~
^{ductivity}~~formance~~ of Their Offspring." Kiev, 1957. 15 pp (Ukrainian
Acad of Agricultural Sci), 100 copies (KL, 50-57, 119)

- 25 -

TANTSIRAVA, T.I.

(2)
 / Synthesis of spiro[4.4]nonane and spiro[4.4]nonane.
 1. V.A. Tantsirava, T.I. Tantsirava. *Doklady Akad. Nauk S.S.S.R.*, 1952, 152, 100. (Chem. Abstr. 46:100).
 West, J. Am. Chem. Soc. 74, 2025 (1952). 160 ml. liquid NH₃ was added 20 g. and the soln. treated with 23 g. cyclopentadiene, then with 25 g. (CH₃CH₂Br, at -70° stirred 1 hr. until the blue color vanished, dild. with 200 ml. cold Et₂O, stirred 0.5 hr., and treated with H₂O; distn. of the org. layer gave 12 g. cyclopentene (isolated as the dibromide, bp 76.5°, n_D²⁰ 1.4682, d₄²⁰ 1.3720), and 10 g. (21-22%) spiro[4.4]nonane-1,3-dione, bp 53°, n_D²⁰ 1.4790, d₄²⁰ 0.8349, which with maleic anhydride readily yields the adduct, C₁₁H₁₀O₄, m. 93° (from petr. ether). Hydrogenation of 10 g. of the dione over Raney Ni at 50-60 atm. and 64° gave some 12 g. crude, or 3 g. pure spiro[4.4]nonane, bp 155.3-6.3°, n_D²⁰ 1.4610, d₄²⁰ 0.8334 (cf. Zelinskii and G. M. Kosolapoff, *Slavina*, 40, (1952)).

10-12-54
 T.I.

ÉPSHTEYN, Ye.F.; MOSKALEV, A.N.; SERGODSKIY, A.V.; PIGIDA, Ye.Yu.;
TANTSURA, V.A.

Investigating the operation of a gasoline and air jet-piercing
machine. Gor. zhur. no.4:35-37 Ap '65. (MIRA 18:5)

1. Dnepropetrovskiy gornyy institut (for Epshteyn). 2. Filial
Instituta mekhaniki AN UkrSSR (for all except Epshteyn).

TANTS, REV. (G.D.)

✓ Analysis of gas and liquid including MS, IR, NMR, etc.

Ref. Langer, G.D., et al.

and that the gas is a mixture of several compounds. Analyses of the gas showed that it contained several compounds, including ethyl acetate, methyl acetate, and propyl acetate. The gas was found to be a mixture of these compounds, and the liquid was found to be a mixture of these compounds. The gas was found to be a mixture of these compounds, and the liquid was found to be a mixture of these compounds.

PDW

Inst. Chem. Phys., AS USSR

Tantsyrev, G. D.

Stabilization of the temperature of the ion source in the MS-1 and MS-2 mass spectrometers. G. D. Tantsyrev, L. L. Dekabrini, and V. L. Petrov. ~~Zh. tekhn. fiz.~~ ~~45, 1969-7(1055)~~. An improvement is described (3 drawings) of the source of ions which allows the temp. to be kept const. within $\pm 0.5^\circ$, as compared to older models of the same mass spectrometers, where the constancy was achieved within $5-6^\circ$ only. This is really of importance, as e.g., in butane the intensity of the lines changes 0.35% if the temp. of the ion source varies 1° . Two mass spectrograms are presented for heptane and butane, which make the improvement obvious. Werner Jacobson

PMK
MCT

(2)

TANTSYREV, G.D.

1948 AEC-tr-3612

THE PROBLEM OF PREPARING PURE BORON TRI-
FLUORIDE²⁷ M. I. Virok, G. A. Manolov, R. G. Ryabova,
G. D. Tantsyrev, and N. M. Chirkov Translated from
Zhur. Neorg. Khim. 1, 628-31(1958). 7p.

A method is presented for synthesizing BF_3 by thermal
decomposition of KBF_4 in the presence of $BaCl_2$ at tem-
peratures of 650 to 700°C. (U.S.S.R.)

TANTSIREV, G.D.

1 02-22/40

AUTHOR: Vassilovskiy, S.T., Kulevskiy, A.A., Murat, V.Ye., Tantsyrev, G.D.

TITLE: Preparation of Glass Diaphragms for the Inlet System in a Mass Spectrometer (Izgotovleniye steklyannykh diafragm dlya napushknoy sistemy mass-spektrometra)

PERIODICAL: Pribury i Tekhnika Eksperimenta, 1957, Nr 5, p.103 (USSR)

ABSTRACT: In mass spectroscopic analysis of substances such as free radicals which react easily with metals, it is necessary to prepare glass diaphragms through which the gas flows into the ion source. A method of preparing such diaphragms is given. The end of a Pyrex glass tube having an internal diameter of 10 mm is drawn out to a diameter of 2 mm and the end of the tube is polished. After this, the end is heated until the glass softens and it is then pierced through a plane glass slide prepared in a way described in (Ref.1). The glass slide is 30 μ thick and fuses into the tube. The seal is vacuum tight and withstands atmospheric pressure. The cap is then covered with paraffin in which a

Card 1/2

1 01-11/57

Preparation of Glass Diaphragm for the Inlet System in a Mass Spectrometer.

A small hole is made with a hot needle (Fig.1). On either side of the thin cover are placed electrodes connected to an induction coil. By closing a key in the primary, a potential difference of 150 volts is applied to it from a bank of condensers having a capacity of 100 microfarads. When the glass wall is pierced by a single spark, a round aperture 10 μ in diameter is produced in the centre. The diameter can be increased to 30 μ if the discharge is repeated several times. In order to obtain bigger diameters, fluoric acid may be applied to the edges of the aperture. Diameters of 100 to 500 μ can be obtained in this way. The diaphragm may be fused into the inlet system of the mass spectrometer as shown in Fig.2. V.L. Tal'roze collaborated. There are 2 diagrams, no tables and 1 Russian reference.

ASSOCIATION: Institute of Chemical Physics of the Academy of Sciences of the USSR. (Institut khimicheskoy fiziki AN USSR)

SUBMITTED: February 5, 1957.

AVAILABLE: Library of Congress.

Card 2/2

1. Spectrometers 2. Diaphragms-Glass-Application

TANTSIREV, G. D.

AUTHORS: Tantsyrev, G.D., and Tal'roze, V.L.

120-5-11/35

TITLE: Measurement of Weak Ion Currents in a Mass-spectrograph
Using an Ionization Chamber (Izmereniye slabykh ionnykh
tokov v mass-spektrometre ionizatsionnoy kameroy)

PERIODICAL: Priory i Tekhnika Eksperimenta, 1957, No.5,
pp. 51 - 53 (USSR)

ABSTRACT: To measure ion currents smaller than 10^{-14} or 10^{-15} A in mass spectrometry it is possible to use electron multipliers or photomultipliers which count separate ions. However, this procedure involves the use of complex electronics and the range of currents which can be measured in this way is rather limited (it is difficult to measure currents greater than 10^{-15} because of the low resolving power of such systems). Measurement of the ion current using the mean current of an electron multiplier is difficult because of the insufficient constancy of the amplification coefficient of multipliers. In addition, there are problems associated with the appreciable dark current. In connection with these difficulties, it is interesting to consider the possibility of using devices similar to the ionisation chamber since these have both high sensitivity and sufficient stability. Recently (Ref.2) an

Card 1/4 application of the Geiger counter was described. In this

Measurement of Weak Ion Currents in a Mass-spectrograph Using an
Ionization Chamber. ^{120-5-11/35}

device, the ions were admitted to the counter by two small diaphragms. However, such a system is unwieldy and appreciably affects the vacuum in the mass-spectrograph. In the present note, a system is described which is free from these objections. It uses gas multiplication; the ion current is transformed at a nickel target into an electron current and is then amplified in an ionization chamber. The current in the chamber is measured by an electrometer. The system is shown diagrammatically in Fig. 1. Ions having an energy of 2 keV are admitted through a collecting slit 1 and further accelerated between electrodes 2 and 3 (additional energy up to 20 keV) and then impinged on a nickel plate 4. The coefficient of secondary emission is practically independent of energy above 7 keV and is equal to 4.3 for the ions H_2O^+ . The secondary electrons are accelerated by electric field into the ionization chamber which is at earth potential. A cylindrical ionization chamber is used having the following dimensions: internal diameter 10 mm, diameter of collecting electrode 1 mm, length of camera 40 mm, window thickness 0.5 mg/cm². Measurements have shown that

Card2/4 when the chamber is filled to a pressure of 44 mmHg and at ion

Measurement of Weak Ion Currents in a Mass-spectrograph Using an Ionization Chamber.

120-5-11/35

currents of the order of 10^{-12} A the curve of the current through the ionization chamber as a function of the potential difference between the electrodes has a plateau beginning at 5 V (Fig.2). The coefficient of amplification of the system as a function of the energy of the electrons at various pressures is shown in Fig.3. At electron energies of 20 keV, the amplification coefficient increases proportionately with pressure in the chamber. For ions of mass $32(O_2^+)$ and the chamber pressure of 45 mmHg, the amplification coefficient was 360. The stability of the latter was found to be of the order of $\pm 2\%$. It is thought that when the electrons pass through the chamber window, they are strongly scattered and therefore enter the chamber at an angle to the central collecting electrode. For this reason, the authors suggest that higher amplification coefficients will be obtained when the diameter of the chamber is increased. If necessary, the system may be used also for the counting of separate ions if one changes the working regime from ionization to Geiger.

Card3/4 There are 3 figures, 4 references, 1 of which is Slavic.

120-5-11/35

Measurement of Weak Ion Currents in a Mass-spectrograph Using an Ionization Chamber.

ASSOCIATION: Institute of Chemical Physics of the Ac.Sc. USSR.
(Institut khimicheskoy fiziki AN SSSR)

SUBMITTED: March 21, 1957.

AVAILABLE: Library of Congress.

Card 4/4

AUTHORS:

7/10/54 REV. 100
Lavrovskaya, G. K., Skurat, V. Ye., Tal'roze, V.L., 20-4-27/52
Tantsyrev, G. D.

TITLE:

Mass-Spectroscopic Investigation of the Products of Discharge
in Steam (Mass-spektroskopicheskoye issledovaniye produktov
razryada v parakh vody).

PERIODICAL:

Doklady AN SSSR, 1957, Vol. 117, Nr 4, pp. 641-644 (USSR)

ABSTRACT:

The here discussed measurements were carried out with a mass spectrometer specially constructed for the determination of free radicals and atoms. The peculiarity of this apparatus is the introduction of the mixture to be analyzed into the ion source in form of a bundle of molecules. The molecule bundle is here coaxial with the ion-bundle. The system of the formation of this molecule bundle and the scheme of the connection of the apparatus of discharge with the mass spectrometer is demonstrated in a diagram. Further particulars are given on the design and calibration of this instrument. The authors then discuss the results of the mass-spectroscopical measurements of the concentration of the atoms and radicals in the discharge-products formed in the steam. Measurements were carried out at pressures of from 0,5 to 4 mm torr. and with a discharge amperage of from 100 to 150 mA. The intensities of the

Card 1/3

Mass-Spectroscopic Investigation of the Products of Discharge
in Steam.

20-4-27/52

currents of ions I' and I'' for m/e = 1, 2, 16, 17, 18, and 32 were measured. With a steam pressure from 0,5 to 1,5 mm torr., H-atoms and the free hydroxyl, but no O-atoms were observed in the discharge. An evaluation of the sensitivity of the apparatus show that the concentration of the O-atoms is in each case smaller than the concentration of OH. O-atoms were observed with an increase of pressure to 3 mm torr. . The results of these measurements were summarized in a table. The intensities of the current of ions I depend only on the atoms H₂O and on the free hydroxyl. The concentrations of the atoms H and O, as well as of the free hydroxyl are numerically given. The mass spectroscopic measurements confirm the existence of an important concentration of O-atoms in the products of a discharge in steam. At least two processes must contribute to the occurrence of O-atoms with this discharge:

$$\text{OH}^+ + \text{H}_2\text{O} \rightarrow \text{O} + \text{H}_3\text{O}^+ + 58 \text{ kkal/mol}; \text{OH} + \text{H}_2\text{O}^+ \rightarrow \text{O} + \text{H}_3\text{O}^+ + 47 \text{ kkal/mol}.$$

With an increase of the pressure these processes must play a steadily increasing rôle. There are 2 figures, 2 tables, and 13 references, 8 of which are Slavic.

Card 2/3

Mass-Spectroscopic Investigation of the Products of Discharge 20-4-27/52
in Steam.

PRESENTED: May 16, 1957, by V. N. Kondrat'yev, Academician.

SUBMITTED: April 28, 1957

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Tants, rev, G. D., Tal'roze, V. L.

20-117-5-20/54

TITLE: The Reversion of the Relation Between the Fragment Line Intensity and Temperature in the Molecular Mass Spectrum (Obrashcheniye temperaturnoy zavisimosti intensivnosti oskolochnykh liniy v molekulyarnom mass-spektre).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 5, pp. 802-803 (USSR)

ABSTRACT: The temperature dependence of the mass spectra at low energies of the electrons (in the vicinity of the potentials related to the occurrence of fragment ions) must be of prime interest for the creation of a theory of the dissociative ionisation. The authors conducted such measurements, using as a practical example H-heptane, with the help of the mass spectrograph MC - 1a, which was provided with a system for measuring and stabilising the temperature of the ion source. The distribution of the intensity of the lines of the mass spectrum at various energies of the electrons was measured. The results of the examinations of the ions $C_5H_{11}^+$, $C_4H_9^+$ and $C_3H_7^+$ are illustrated in a diagram. In all of the cases under investigation the temperature dependence $I/\sum I$ proved to be roughly linear. I denotes the intensity of a given line, and $\sum I$ the total intensity of all lines. A reduction of the energy of the electrons shifts the temperature coefficient of the quantity $I/\sum I$ towards more positive values for the lines under investigation.

Card 1/2

The Reversion of the Relation Between the Fragment Line Intensity
and Temperature in the Molecular Mass Spectrum. 20-117-5-20/54

stigation. It appears, that in the case of the ions $C_4H_9^+$ and $C_5H_{11}^+$ such electron energies exist, at which the amount of the temperature coefficient passes through zero, this obviously indicating the existence of a reversal effect. The phenomena observed here may be interpreted as follows: The decomposition of the originally molecular ion ($C_7H_{16}^+$ in our case) (which is produced immediately after the collision of the molecule with the electron,) does not take place instantaneously for all the possible fragment ions, but proceeds in stages. For example, the first decomposition processes occur in the C-C-bindings and the fragment ions produced in this way decompose further along the C-C and C-H bondings. For a qualitative application of the effect observed here it will be necessary to measure the temperature dependence and the exact potentials connected with the occurrence of every ion in the mass spectrum of the molecule under investigation. There are 1 figure, 8 references, 4 of which are Slavic.

ASSOCIATION: Institute for Chemical Physics AS USSR (Institut khimicheskoy fiziki Akademii nauk SSSR)
PRESENTED: July 6, 1957, by V. N. Kondrat'yev, Academician
SUBMITTED: June 29, 1957

Card 2/2

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9.6150
5.5800(1043, 1228, 1273)
26.2312
11.1320

S/120/60/000/006/021/045
E032/E514

AUTHORS:

Tal'roze, V.L., Dekabrun, L.L., Tantsyrev, G.D.,
Frankovich, Ye.L., Vetrov, O.D., Lyubimova, A.K.,
Lavrovskaya, G.K., Yerofoyev, V.I., Grishin, V.D.,
Skurat, V.Ye. and Yukhvidin, A.Ya.

TITLE:

The PMC-2 (RMS-2) Mass Spectrometer Designed for
Studying Chemical Reactions and the Determination of
Free Radicals

PERIODICAL: Priory i tekhnika eksperimenta, 1960, No.6, pp.78-84

TEXT: A double magnetic mass-spectrometer designed for study-
ing reactions in the gaseous phase and, in particular, for the
determination of free radicals is described. Two methods are used
to produce the ions. In the first method the mixture to be
analysed is ionized by charge transfer to specially produced ions.
The latter are formed in a separate ion gun by means of electron
bombardment and are mass-analysed in a small magnetic analyser.
In the second method the mixture under consideration is ionized
directly by electron bombardment. Quasi-monochromatization is
achieved by a method based on that reported by Fox et al. (Ref.11).
The gas from the "reactor" is introduced into the ion source in the
Card 1/6

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S/120/60/000/006/021/045
E032/E514

The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

form of a molecular beam which is mechanically interrupted at a known frequency. In distinction to the method described by Foner and Hudson (Ref.2), in which the molecular and ion beams are perpendicular, in the present system the two beams are coaxial, which means that smaller voltages are necessary for the "extraction" of the ions from the ionization region and it is possible to reduce the intensity of the background mass-spectrum. A particular feature of the present instrument is the use (in the measuring part of the spectrometer) of K-stabilization of parameters such as the accelerating voltage, the voltage supplying the detector, the emission current of the ion gun cathode, and the supply voltage for the ion source cathode. This was described by the second of the present authors in Ref.10. The mass numbers are determined from a knowledge of the magnetic field which in turn is measured with the aid of a Hall probe (germanium crystal). The basic mass spectrometric arrangement employed is shown in Fig.2. Products of chemical reactions taking place in the "reactor" I enter the region II through a small aperture in the thin glass diaphragm 8

Card 2/6

86746

S/120/60/000/006/021/045
E032/E514

The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

in the form of a molecular beam. This molecular beam is collimated further by the diaphragm 6 which separates the volume II from the region in which ionization takes place. A moveable screen 7 is placed in front of the diaphragm 6 and interrupts the molecular beam 33 times per sec. In the case of ionization by charge transfer, the primary ions are produced in the ion gun III. The ion beam formed there is mass analysed in the 60° magnetic analyser IV which has a working radius of 100 mm. The primary ion beam, consisting of ions of the required mass, intersects the molecular beam and charge transfer takes place. In the case of ionization by electron impact, the source becomes analogous to that described by the first and fourth of the present authors in Ref.9. In the case of ionization by a monochromatized electron beam, the modulation of the molecular beam by the chopper 7 is not employed. The ion current in the mass-spectrometer is measured either by a d.c. amplifier or by an electron multiplier. The vacuum chamber of the mass-spectrometer is an all-metal system and all the sections are out-gassed at 300 to 350°C before the operation is begun. As an illustration of

Card 3/6

86746

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E032/E514**The PMC -2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals**

the possible applications of the instrument, data are quoted on the formation of free radicals in the pyrolysis of hydrazine. In these experiments the hydrazine entered from a glass container into a quartz capillary through a control valve. The capillary was heated to a known temperature, as a result of which the hydrazine decomposed into nitrogen, hydrogen, ammonia and some unstable products (Foner and Hudson, Ref.18). Fig.7 shows the distribution of line intensities in the mass-spectrum of hydrazine obtained by the charge transfer method using HH_3^+ ions formed from ammonia. The pressure in the source was 5×10^{-5} mm Hg and the pressure in the chamber of the small analyser was 4×10^{-5} mm Hg. For comparison, the dotted line shows the mass-spectrum obtained on bombarding hydrazine with 50 eV electrons. Fig.8 shows the intensity distribution obtained under similar conditions at 1000°C (dotted lines) and 25°C (continuous lines). Acknowledgments are expressed to Ye. K. Russiyan, B. T. Vorob'yev, B. G. Belov, M. N. Morozov and M. I. Markin for assistance in this work. There are 8 figures and 20 references: 11 Soviet and 9 non-Soviet.

Card 4/6

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E032/E514

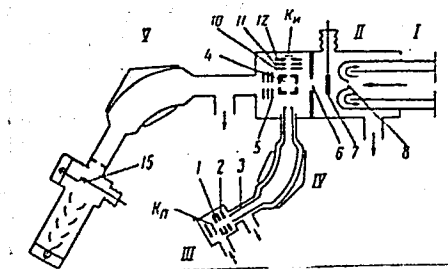
The **PMC-2 (RMS-2) Mass Spectrometer** Designed for Studying Chemical Reactions and the Determination of Free Radicals

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS, USSR)

SUBMITTED: October 15, 1959

Fig. 2

I - reactor, III - ion gun, IV - small magnetic analyser,
V - large magnetic analyser



Card 5/6

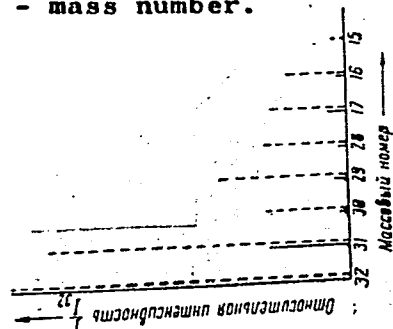
86746b

S/120/60/000/006/021/045
EO32/E514

The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

Fig.7

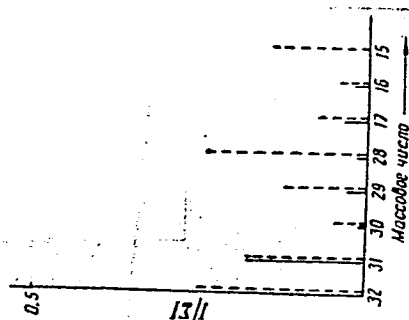
Comparison of mass-spectra of hydrazine obtained on electron bombardment (dotted) and charge transfer from NH_3^+ ions (full lines).
Key: 1 - relative intensity,
2 - mass number.



Card 6/6

Fig.8

Charge transfer mass spectra of hydrazine and its decomposition products at 1000°C (dotted) and 25°C (full line).



TAL'ROZE, V.L.; ZIMINA, K.I.; POLYAKOVA, A.A.; TANTSYREV, G.D.

Mass spectrum analysis of mixtures of organic substances.
Trudy Kom.anal.khim. 13:456-474 '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza i polucheniya iskusstvennogo zhidkogo topliva.
(Organic compounds) (Mass spectrometry)

L 10271-63

EWT(1)/BDS/ES(w)-2--AFFTC/ASD/SSD--Pab-4--IJP(G)

ACCESSION NR: AP3002734

8/0120/63/000/003/0118/0121

AUTHOR: Tantsyrev, G. D.; Karpov, G. V.; Tal'roze, V. L.

TITLE: Analytical mass spectrometer with modulated molecular beam

SOURCE: Pribery i tekhnika eksperimenta, no. 3, 1963, 118-121

TOPIC TAGS: mass spectrometer, trace detectability, molecular beam modulation

ABSTRACT: Modifications of existing mass spectrometer design are described, consisting of modulating the injected gas molecule beam prior to its ionization and replacing the usual collector head with a multiplier tube, electrometer amplifier, a-c amplifier, and phase detector. This method increases the detectability of small traces which tend to be obscured by noise effects in the apparatus, such as residual gas in the vacuum chamber, gas evolution from chamber elements, and adsorption. Beam modulation (see Fig. 1 of Enclosure) is obtained by the action of shutter 7, which is energized by solenoid 8 to interrupt the beam between diaphragms 2 and 6 at periodic rates up to 100 cps. In this way, only the desired gas in modulated form is detected for analysis. Electrometer amplifier input impedance is approximately 100 megohms, and a-c amplifier gain is about 300. Sample data are given showing the comparative interference effects with and without

Card 1/32

L 10271-63

ACCESSION NR: AP3002734

beam modulation for two cases where contaminating traces of water or ethyl alcohol are present in the injection system. The registered line intensities in both instances are almost an order of magnitude less when using modulation. Other advantages cited are 1) a much reduced degree of interaction between contaminant-introducing chemically active elements in the beam and chamber sections, and 2) the fact that the temperature stabilization required to maintain spectral clarity can now be accomplished in the injection system, which is easier than effecting stabilization in the ionization chamber. The modifications described are adaptable to existing mass spectrometers. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AN SSSR)

SUBMITTED: 09Jul62

DATE ACQ: 12Jul63

ENCL: 01

SUB CODE: 00

NO REF SOV: 003

OTHER: 004

Card 2/2

TAL'ROZE, V.L.; RAZNIKOV, V.V.; TANTSYREV, G.D.

Minimum of information sufficient to identify individual organic substances by coincidence of their mass spectrum lines. Dokl AN SSSR 159 no.1:182-185 N '64. (MIRA 17:12)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom N.N. Semenovym.

L 41317-65 EVI(m)
ACCESSION NR: AP5008560

S/0286/65/000/006/0072/0072

AUTHORS: Tal'roze, V. L.; Tantayrev, G. D.; Gorshkov, V. I.; Kibalko, L. A. ^{2/6}_B

TITLE: Equipment for determining the composition of a complex mixture of gases.
Class 42, No. 169287 ¹

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 6, 1965, 72

TOPIC TAGS: gas mixture, gas spectroscopy, gas chromatography, gas analysis ¹

ABSTRACT: This Author Certificate presents a device for determining the composition of a complex mixture of gases. The equipment includes a capillary chromatograph and a mass spectrometer. The chromatograph is directly connected to the inflow of the ion source in the mass spectrometer.

ASSOCIATION: none

SUBMITTED: 23Feb61

ENCL: 00

SUB CODE: ME,CC

NO REF SCV: 000

OTHER: 000

Card 1/1 *ae*

TAL'ROZE, V.L.; TANTSYREV, G.D.; GORSHKOV, V.I.

Chromatographic mass spectrometry. Part 2: Problems arising during the contact of chromatographic columns with the mass spectrometric detector. Zhur. anal. khim. 20 no.1:103-111 '65. (MIRA 18:3)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

KOZLOV, S.T.; TANTSIREV, G.D.; TAL'ROZE, V.L.

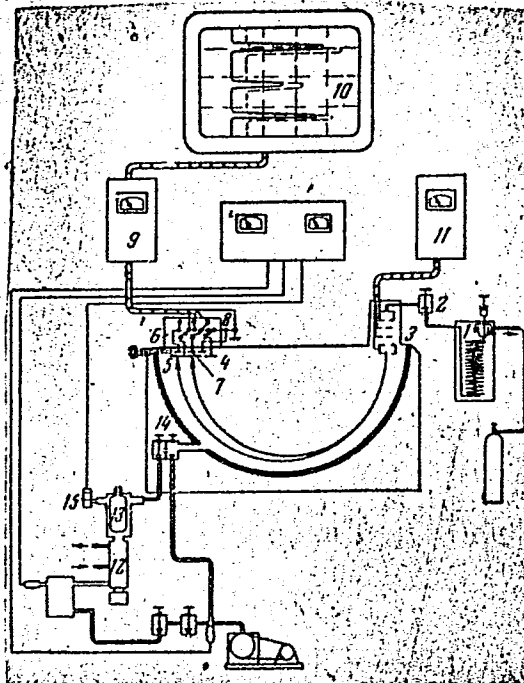
Catalytic disintegration of certain oxygen-containing organic compounds on stainless steel. Zav. lab. 31 no.9:1113-1114 '65.
(MIRA 18:10)

1. Institut khimicheskoy fiziki AN SSSR.

L 27745-66 EWT(m)/EWP(t)/ETI IJP(c) JD	
ACC NR: AP6001580	SOURCE CODE: UR/0120/65/000/006/0130/0135
AUTHOR: <u>Tal'roze, V. L.; Pavlenko, V. A.; Tantsyrev, G. D.;</u> <u>Grishin, V. D.; Ozerov, L. N.; Kirillova, I. I.; Rafal'son, A. E.</u> 38 <u>Shutov, M. D.</u> B	
ORG: <u>Institute of Chemical Physics of AN SSSR, Moscow (Institut khimicheskoy fiziki)</u>	
TITLE: <u>MKh1307</u> ¹⁰ chromato-mass-spectrometer (Khromass-2)	
SOURCE: <u>Pribory i tekhnika eksperimenta, no. 6, 1965, 130-135</u>	
TOPIC TAGS: chromatography, mass spectrometer	
ABSTRACT: The design and operation of MKh1307 mass-spectrometer is described. This spectrometer is formed by combining a chromatograph with a two-beam magnetic mass-spectrometer. A laboratory version of Khromass-2 spectrometer served as a prototype for MKh1307 type. The arrangement of MKh1307 chromato-mass-spectrometer is schematically shown on Card 2/2. The chromatograph (1) is connected via a dose-valve (2) to the ion-source (3) of the mass-spectrometer which is equipped with two large (4 and 5) and two small (6 and 7) collectors. By using a switch (8) the collectors can be connected to a set of two electrometer amplifiers (9). Double ion currents are automatically recorded	
Card 1/3	UDC: 543.51,543.544

L 27745-66

ACC NR: AP6001580



Card 2/3

by an electronic potentiometer (10). The ion source was fed from an electronic circuit (11). The small collectors were used for measurements of two mass-spectral lines while the large ones collected the intensities of two line groups. The spectral peaks were measured for each of two measuring channels and their heights were compared. The peak ratio was used for defining tested substances. The design of chromatograph was illustrated and described. It can be equipped either with capillary or packed columns. The ion system consisting of ion source, mass analyzer and ion collectors, was also described and diagrammatically represented. The ion source was placed in the magnetic field of a mass-analyzer. A permanent magnet of about 6000 gauss was used. The resolving power of the mass-spectrometer was

L 27745-66

ACC NR: AP6001580

about 50. The ion collectors were designed for a simultaneous measurement of two spectral lines differing in masses from 4 to 6%. A simultaneous recording was also provided for two groups of lines including one group of 34 to 45 amu and the second of 48 to 100 amu. The electronic circuit feeding the ion source was designed for cathode currents up to 2 ma, accelerating voltages of 300 to 1200 v and ionizing voltages of 50 to 100 v. The vacuum system was also described and the MKh1307 apparatus was shown in a photo. Some results of measurements were summarized in a table. A high sensitivity of the MKh1307 spectrometer permits defining the mixtures with contents up to $10^{-4}\%$. Orig. art. has: 5 figures.

SUB CODE: 20 / SUBM DATE: 5Oct64 / ORIG REF: 010 / OTH REF: 006

Card 3/3 *Jo*

TANTS/REV, I. N.

0000

U S S R .

Use of the solubility of bituminous coal in anthracene oil for their classification. V. I. Zabavin and I. N. Tantsyrev. *Trudy Inst. Goryekh. Iskopaemykh, Akad. Nauk SSSR*, 2, 227-35 (1950).—The detn. of soly. of all grades of bituminous coals in anthracene oil (by methods previously described) showed that the soly. value of coals agrees well with the agglutination value of coals and with the thickness of the plastic layer. A comparison of both methods shows that the soly. in anthracene oil is more characteristic for lean coals, while agglutination value differentiates better between gas and fat coals. Both methods are in good agreement for coking coals. W. M. Sternberg

LFH

TANTSUREV, K.M.

Work relative to ties and ballast should be excluded from
track maintenance operations. Put' i put.khoz. no.10:23
0 '59. (MIRA 13:2)

1. Nachal'nik tekhnicheskogo otdela putevoy mashinnoy
stantsii - 32, stantsiya Barybino, Moskovskoy dorogi.
(Railroads--Maintenance and repair)